RF Exposure Report

Report No.: SA130511C01E

FCC ID: I88EMG2926Q10A

Test Model: EMG2926-Q10A

Series Model: NBG6716

Received Date: Oct. 30, 2015

Test Date: Nov. 02 ~ Dec. 10, 2015

Issued Date: Dec. 29, 2015

Applicant: ZyXEL Communications Corporation

Address: No. 2, Gongye E. 9th Road, Hsinchu Science Park, Hsinchu Taiwan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

Test Location: No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

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Release Control Record

Issue No.	Description	Date Issued
SA130511C01E	Original release.	Dec. 29, 2015

1 Certificate of Conformity

Product:	Dual-Band Wireless AC/N Gigabit Ethernet Gateway
Brand:	ZyXEL
Test Model:	EMG2926-Q10A
Series Model:	NBG6716
Sample Status:	Engineering sample
Applicant:	ZyXEL Communications Corporation
Test Date:	Nov. 02 ~ Dec. 10, 2015
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 (October 23, 2015) IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Dec. 29, 2015

Ivy Lin / Specialist

Approved by : _____ , **Date:** Dec. 29, 2015

Ken Liu / Senior Manager

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 23cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	29.19	6.77	23	0.593	1
5180-5240	27.19	6.77	23	0.374	1
5745-5825	25.52	6.77	23	0.255	1

Note: Directional gain = 2dBi + 10log(3) = 6.77dBi

Conclusion:
The formula of calculated the MPE is:
CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1
CPD = Calculation power density
LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.593 + 0.374 = 0.967
Therefore all the maximum calculations of above situation is less than the “1” limit.

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